AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph at page 7, line 5, as follows:

C1 Conveniently, the cationic polymer of lipid comprises ~~Transfast or GenePORTER~~ TRANSFAST or GENEPORTER.

Please amend the paragraph beginning at page 12, line 31, as follows:

C2 Figure 18 shows western blot analysis of human Bcl-2 expression to compare gene transfer efficiency of different DNA carriers. Rat brainstem samples were collected 2 days after tongue injection. Lane 1 and 10: size marker; lane 2: positive control, Bcl-2 transfected NT2 cells; lane 3: injected with chitosan/Bcl-2 complex (0.05% chitosan in HAC); lane 4: injected with Poly-L-lysine/Bcl-2 complex (100ng/ul of PLL in DMEM); lane 5: injected with PEI/Bcl-2 complex (N/P = 10/1); lane 6: injected with PEI solution alone; lane 7: injected with naked Bcl-2 plasmid DNA; lane 8: Bcl-2/~~Transfast~~ TRANSFAST complex; lane 9: Bcl-2/~~GenePORTER~~ GENEPORTER complex. Molecular weights of protein standards are stated on the left site of the blot. Tissue extracts with 20 μg of total proteins per lane were electrophoretically separated in 12.5% SDS-PAGE, transferred to a nitrocellulose sheet, and immunoreacted with a monoclonal antibody against human BCL-2.

Please amend the paragraph at page 14, lines 4-5, as follows:

C3

~~GenePORTER~~ GENEPORTER	cationic lipid comprising 1,2-dioleoyl phosphatidylethanolamine

Please amend the paragraph at page 14, lines 18-20, as follows:

C4

~~Transfast~~ TRANSFAST	N,N[bis(2-hydroxyethyl)-N-methyl-N-[2,3-di(tetradecanoyloxy)propyl] ammonium iodide/1,2-dioleoyl phosphatidylethanolamine

Please amend the paragraph at page 18, lines 5-14, as follows:

C5 Embodiments of the invention also include loading the nerve guide conduits with polyethylenimine/DNA complexes which improves the regeneration quality of severed nerves. The complexes migrate by retrograde axonal transport to neuronal cell bodies in the spinal cord after being internalized by nerve terminals. Gene expression is detectable as early as 24 hours after loading and lasts for at least 2 weeks. Several other cationic polymers or lipids, such as poly-L-lysine, chitosan, ~~Transfast or GenePORTER~~

TRANSFAST or GENEPORTER, may deliver genes through the same way. The gene delivery method of embodiments of the invention bypasses the blood-brain barrier and provides a practical therapeutic strategy that is non-invasive to the spinal cord.

Please amend the paragraph beginning at page 38, line 34, as follows:

In addition to polyethylenimine, other cationic polymers or lipids may also be used to deliver genes through endocytosis and retrograde axonal transport. The gene expression of human Bcl-2 was used to compare their relative transfer efficiency. Optimal ratios between DNA and poly-L-lysine, chitosan, ~~Transfast or GenePORTER~~ TRANSFAST or GENEPORTER were tested in agarose gel electrophoresis and COS7 cell transfection. The same amounts of pcDNA3/Bcl-2 were then complexed with those polymers and lipids under the conditions optimized for each individual agent and injected into the tongue. The proteins extracted from the brainstem 2 days after injection were subjected to western blotting (Fig. 18). The highest expression level was obtained with PEI, which is at least two times higher than that mediated with poly-L-lysine and chitosan as showed by densitomeric analysis. Very weak expression was observed with two cationic lipids, ~~Transfast and GenePORTER~~ TRANSFAST and GENEPORTER. Injection of free plasmid DNA into the tongue did not gain detectable Bcl-2 expression in the brainstem.